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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/089,507	03/28/2002	Carlos Correa	PD990069	9459

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EXAMINER

KUMAR, SRILAKSHMI K

ART UNIT PAPER NUMBER

2675

DATE MAILED: 09/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/089,507

Applicant(s)

CORREA ET AL.

Examiner

Srilakshmi K. Kumar

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on RCE, June 20, 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-8 is/are allowed.
- 6) ☒ Claim(s) 9-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

The following office action is in response to RCE and Amendment, filed June 20, 2005. Claims 9-16 are newly added. Claims 1-16 are pending.

#### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 9-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoi et al (EP 0 888 004 A2) in view of Koji (JP 11-194745 A)

As to independent claims 9 and 15, Hosoi et al disclose a method for power level control in a display device (controlling brightness of a video signal, col. 1, lines 8-9) having a plurality of display elements corresponding to the pixels of a picture, wherein a power level mode selection process is used for increasing the peak white enhancement factor of the display (Fig. 3, items 110-112 multipliers), in which the power value of a video picture is measured (APL calculating circuit, Fig. 3, item 105, col. 9, lines 42-57) and a corresponding power level mode is selected for controlling the display contrast (Fig. 3, item 109, col. 10, lines 15-22, the coefficient setting circuit), wherein a picture is divided in a number blocks (col. 9, lines 48-50), wherein in each block the video levels or values derived from the video levels of the color components of the pixels are summed up in order to determine the local power values for the picture (Fig. 3, item 104, col. 9, lines 43-44), characterized in that a local temperature estimation is performed for the corresponding blocks of the display based on said local power values (col. 10, lines 3-14,

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col. 11, lines 25-29, where the average power determined by the APL for a block and the head generated by the PDP of said block are proportional to current flow required by the plasma element); Hosoi et al do not disclose where previously estimated local temperature values are used. Koji disclose in abstract, where a previously predicted value is used. It would have been obvious to one of ordinary skill in the art to incorporate the temperature estimating unit of Koji into that of Hosoi et al as the system of Koji prevents damage of the displayed picture due to temperature rise without sacrificing picture quality (abstract).

Hosoi et al disclose wherein in the estimated local temp. values the maximum local temp in the display is selected (col. 11, lines 25-29, a predetermined limit), Hosoi et al do not explicitly state where the max. power limit is determined due to max local temp. It would have been obvious to one of ordinary skill in the art that max power limit is determined based on max local temp as Hosoi et al disclose where in order to prevent the driver ICs from being destroyed or damaged as the brightness is lowered when the max temp limit is closed to being reached (col. 11, lines 25-29); and wherein the power level limit is used to restrict the range of the selectable power level modes in the power level mode selection process to power level modes having a power level below or equal to said power level limit (col. 10, lines 3-14, col. 11, lines 25-29).

As to dependent claim 10, limitations of claim 9, and further comprising, wherein for local temp. estimation of a block, the power dissipation not only of the local block, but also of a number of neighboring blocks is taken into account (col. 10, line 58-col. 11, line 29).

As to dependent claim 11, limitations of claim 9, and further comprising, wherein the maximum local temp. determination for the display is performed once in a number of video frames (col. 10, line 58-col. 11, line 29).

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As to dependent claim 12, limitations of claim 11, and further comprising, wherein the steps of local power value determination and local temp. estimation are performed only for one or more selected blocks of the whole picture within a frame period (col. 10, line 58-col. 11, line 29).

As to dependent claim 13, limitations of claim 11, and further comprising, wherein a picture is divided in 40 blocks and the maximum local temperature determination is performed once within 40 frame periods. In an alternate embodiment, Hosoi et al disclose 32 blocks in col. 11, lines 40-52. It would have been obvious to one of ordinary skill in the art that Hosoi et al could have also had the amount of block divided into 40 as determined by the user.

As to dependent claim 14, limitations of claims 9, and further comprising, wherein the switching between maximum allowed power level limits corresponding to the determined maximum local temperature is controlled with a power level mode against picture power curve that falls if the picture power is increasing and that rises if the picture power is decreasing, and with a delay between falling and rising, respectively rising and falling if the change direction of the picture power value changes (col. 10, line 58-col. 11, line 29).

As to dependent claim 16, limitations of claim 15, and further comprising, wherein it is integrated in a plasma display device (col. 6, line 47).

#### ***Response to Arguments***

3. Applicant's arguments with respect to claims 9-16 have been considered but are moot in view of the new ground(s) of rejection.
4. Claims 1-8 are allowed.

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As per previous office action of March 15, 2005. Claims 1-8 have been allowed. The following are reasons for allowance;

With respect to independent claims 1 and 7, the prior art of record fail to disclose a method for power level control in a display device, specifically, wherein a local temperature estimation is performed according to the formula  $T(i,j)_t = T(i,j)_{t-1} + a \cdot P(i,j)_t - D$ , where  $T(i,j)_t$  is the new estimated local temperature of a block, where  $T(i,j)_{t-1}$  is the previous estimated local temperature of a block, where  $a \cdot P(i,j)_t$  is the power being dissipated in the block and D is the power dissipation corresponding to the heat being given to the environment.

With respect to dependent claims 2-6 and 8, claims are allowed as they depend upon an allowed base claim.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Srilakshmi K. Kumar whose telephone number is 571 272 7769. The examiner can normally be reached on 10:00 am to 6:30 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 571 272 3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Srilakshmi K. Kumar  
Examiner  
Art Unit 2675

SKK  
September 17, 2005

  
CHANH NGUYEN  
PRIMARY EXAMINER